

What is claimed is:

1. A method for identifying an agent that increases an N-Methyl-D-Aspartate (NMDA) receptor mediated response in a neuron to an agonist comprising contacting the neuron with the agent, the neuron comprising an NMDA receptor and an elevated level of protein kinase C (PKC), and determining whether the NMDA receptor mediated response in the neuron contacted with the agent is altered relative to a neuron not contacted with the agent.
2. The method of claim 1 wherein the neuron is *ex vivo*.
3. The method of claim 2 wherein the neuron is isolated from a spinal cord.
4. The method of claim 3 wherein the neuron is isolated from a dorsal horn.
5. The method of claim 4 wherein the neuron is isolated from the area of the dorsal horn selected from the group consisting of lamina I, lamina II, lamina IV, and lamina V.
6. The method of claim 3 wherein the neuron is isolated from a central canal.
7. The method of claim 6 wherein the neuron is isolated from lamina X of the central canal.
8. The method of claim 2 wherein the neuron is isolated from a brain.
9. The method of claim 8 wherein the neuron is isolated from a trigeminal subnuclear caudalis.
10. The method of claim 1 wherein the neuron is *in vitro*.

11. The method of claim 10 wherein the neuron is a human neuroblastoma neuron.
12. The method of claim 11 wherein the neuron is selected from the group consisting of NG108-15, N1E-115, and SHSY5Y.
13. The method of claim 1 wherein the agonist is selected from the group consisting of NMDA, glutamate, and aspartate.
14. The method of claim 1 further comprising determining whether the agent increases the affinity of glycine for the NMDA receptor.
15. A method for identifying an agent that, in an animal, reduces pain from a neuropathological condition, the method comprising contacting a neuron with the agent, the neuron comprising an NMDA receptor and an elevated level of PKC, and determining whether the NMDA receptor mediated response in the neuron contacted with the agent is altered relative to a neuron not contacted with the agent.
16. The method of claim 15 wherein the neuropathological condition is selected from the group consisting of peripheral nerve injury, postherpetic neuralgia, diabetic neuropathy, trigeminal neuralgia, and cancer.
17. The method of claim 15 wherein the neuron is *ex vivo*.
18. The method of claim 15 wherein the neuron is *in vivo*.
19. The method of claim 18 wherein the alteration in the NMDA receptor mediated response is measured by evaluating a change in allodynia in an animal.

20. The method of claim 18 wherein the alteration in the NMDA receptor mediated response is measured by evaluating a change in hyperalgesia in an animal

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